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Varietal Description of Creme Six-Row Spring Barley

Origin and breeding

Creme was developed by the University of Saskatchewan, Saskatoon, Saskatchewan. It was derived form the cross Morex/Minnesota M66-124/Bonanza and was assigned the test number SM79444 in 1979.

Varietal characteristics

Plant characteristics

Juvenile growth habit: erect

Coleoptile color: green

Flag leaf: medium green; medium length and width; intermediate attitude; white auricles; waxy sheath

Leaves: medium green, medium length and width, glabrous purple sheath; glabrous blade

Stem: bluish green; waxy bloom; medium thickness; slightly curved neck; v-shaped collar; five nodes; exsertion of 3-10 cm

Heading: midseason

Plant height: tall; 4 mm shorter than Bonanza

Maturity: 1-2 days later than Bonanza

Resistance to shattering: fair

Resistance to neck breaking: good

Resistance to straw breaking: good

Disease reaction: moderately resistant to common root rot (*Helminthosporium sativum*) and stem rust (*Puccinia graminis*); moderately susceptible to covered smut (*Ustilago hordei*) and black semi-loose smut (*U. nigra*); susceptible to loose smut (*U. nuda*), powdery mildew (*Erysiphe graminis*), stripe (*H. gramineum*), scald (*Rhynchosporium secalis*), Septoria leaf blotch (*S. passerinii*), ergot (*Claviceps purpurea*), bacterial blight (*Xanthomonas translucens*), barley yellow dwarf virus and false stripe virus.

Characteristics

Type: six-row

Shape: tapering

Attitude: semi-nodding

Lemma awns: semi-smooth; long; green tip

Glume: more than 1/2 the length of lemma; completely covered with long hair

Glume awn: longer than the glumes; rough; purple tips

Rachis: curved; slightly tapered segments on spike rachis; numerous long hairs on spike rachis edges

Kernel characteristics

Size: medium length and width

Aleurone: yellow

Rachilla: medium length; long hairs; few to frequent abnormal rachillas

Basal marking: transverse crease

Lemma: green lateral veins; many barbs; wrinkled

Quality: good malting quality; intermediate protein content

Acceptable variants: plants with smooth awns; up to 2 per cent of plants with rough awns

Unacceptable offtypes: plants with blue aleurone kernels

Performance

Adapted to Western Canada, Creme has outyielded Bonanza and Argyle in all zones in each year of testing. It has promising malting and brewing quality with high extract and good brewhouse yield.

Maintenance of breeder seed

University of Saskatchewan

Canadian distributor

SeCan Association

Recommended by

Western Canada Barley and Oats Registration Recommending Committee

Copies of this and related publications may be obtained from the Print Media Branch, Alberta Agriculture, 7000 - 113 Street, Edmonton, Alberta T6H 5T6 or Alberta Agriculture's District Offices

Table 1. Yield of Creme and check varieties, Western Co-operative Six-Row Barley Tests*

Year	Variety	Yield (100 kg/ha) Black Soil	Brown Soil	Black & Grey Soil	Peace River	Mean
1981, 1984	Creme	53.8	45.8	47.9	48.8	49.1
	Bonanza	49.8	42.1	44.9	45.7	45.6
	Argyle	—	—	—	—	—
1981, 1983-84	Creme	52.9	46.6	51.2	50.3	50.3
	Bonanza	50.1	43.2	47.4	46.7	46.9
	Argyle	51.5	44.0	50.2	47.0	48.2

*Locations: Brandon, Saskatoon, Glenlea, Lethbridge, Calmar and Regina

Table 2. Agronomic characteristics of Creme and Check varieties, Western Co-operative Six-Row barley tests*

Year	Variety	Lodging (1-9)**	Height (cm)	Maturity (days)	1000 Kernel wt. (g)	Test Wt. (kg/hl)
1981, 1984	Creme	3.3	88	95.0	37.0	61.8
	Bonanza	4.0	92	93.7	36.1	60.5
	Argyle	2.8	93	94.3	35.6	60.0
1981, 1983-84	Creme	3.4	89	92.0	36.9	60.6
	Bonanza	3.7	93	90.8	35.9	60.2
	Argyle	—	—	—	—	—

*Locations: Brandon, Saskatoon, Glenlea, Lethbridge, Calmar and Regina

** (1-9); 1 = best

Table 3. Malting quality of Creme and check varieties, Western Co-operative Six-Row Barley Tests,* 1981-1984

Variety	Plump kernels (%)	Protein (%)	F.Ext.[1] (%)	70°C Ext.[2] (%)	F/70[3] Diff.	Soluable protein (%)	S/T[4] (%)	D.P.[5] (L)	α-amylase (D.U.)
Creme	84.6	13.6	77.3	74.0	3.3	6.2	47.0	207	58.9
Bonanza	78.3	14.3	76.1	73.3	2.8	5.7	40.8	217	61.6

*Locations: Brandon, Saskatoon, Glenlea, Lethbridge, Calmar and Regina

[1]Fine extract

[2]70°C extract

[3]Ratio of fine to 70°C extract

[4]Protein modification

[5]Diastatic power